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=> d stat que
L2 7 SEA FILE=HCAPLUS ABB=ON PLU=ON "ICHIKAWA TETSUSHI"/AU
L4 9 SEA FILE=HCAPLUS ABB=ON PLU=ON "KUWAHARA HISAYUKI"/AU
L6 14 SEA FILE=HCAPLUS ABB=ON PLU=ON L2 OR L4

=> d ibib abs l6 1-14

L6 ANSWER 1 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:539691 HCAPLUS
DOCUMENT NUMBER: 143:61744
TITLE: Addition reaction process for producing an amino composition
INVENTOR(S): Kuwahara, Hisayuki; Numoto, Tsutomu; Echigo, Masatoshi; Ogawa, Shun
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: Eur. Pat. Appl., 25 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|------------|
| EP 1544191 | A1 | 20050622 | EP 2004-29699 | 20041215 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU | | | | |
| JP 2005179204 | A2 | 20050707 | JP 2003-418941 | 20031217 |
| US 2005137424 | A1 | 20050623 | US 2004-2063 | 20041203 |
| PRIORITY APPLN. INFO.: | | | JP 2003-418941 | A 20031217 |
| OTHER SOURCE(S): MARPAT 143:61744 | | | | |
| AB The present invention provides a process for producing an amino composition by addition reaction between a polyamine and an unsatd. hydrocarbon compound in | | | | |

the presence of a strongly basic alkali metal catalyst to obtain an amino composition containing not more than 2% by weight of unreacted polyamine and preferably not more than 10 ppm of alkali metal, which at least comprises the following steps: (A) a step of conducting addition reaction between a polyamine and an unsatd. hydrocarbon compound in the presence of a strongly basic alkali metal catalyst to obtain a reaction liquid containing an amino composition (addition reaction-step), (B) a step of removing unreacted

polyamine

from said reaction liquid containing an amino composition obtained by said addition

reaction-step (A) in the form of a mixture of water and unreacted polyamine by steam stripping to obtain an amino composition wherein the content of unreacted polyamine is not more than 2% by weight (steam stripping-step), and further, if necessary, (C) a step of removing a strongly basic alkali metal catalyst or the alkali metal compound thereof to reduce the content of alkali metal in said amino composition to 10 ppm or less (catalyst-removing-step).

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:716156 HCAPLUS

DOCUMENT NUMBER: 141:226991

TITLE: Low-temperature curable epoxy resin curing agent and epoxy resin composition

INVENTOR(S): Kuwahara, Hisayuki; Echigo, Masatoshi; Koyama, Takeshi

PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan

SOURCE: Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|----------|
| EP 1452554 | A1 | 20040901 | EP 2004-3278 | 20040213 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| US 2004171770 | A1 | 20040902 | US 2004-773277 | 20040209 |
| JP 2004263177 | A2 | 20040924 | JP 2004-34825 | 20040212 |
| CN 1521198 | A | 20040818 | CN 2004-10004948 | 20040213 |

PRIORITY APPLN. INFO.: JP 2003-35487 A 20030213

AB The epoxy resin curing agent capable of achieve a low viscosity without containing environmental harmful substances such as phenol and solvents, comprises a polyamino compound obtainable by addition reaction of a diamine NH₂-CH₂-A-CH₂-NH₂ (A is a phenylene group or a cyclohexylene group) and styrene and a curing accelerator comprising an organic compound having at least one carboxyl group and at least one hydroxyl group within the mol. In addition, the epoxy resin composition using said epoxy resin curing agent shows an excellent curability at low temperature and it provides a cured coating film having excellent appearance.

L6 ANSWER 3 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:625854 HCAPLUS

DOCUMENT NUMBER: 141:157937

TITLE: Modified polyoxyalkylene polyamine with low viscosity as curing agent for epoxy resin

INVENTOR(S): Echigo, Masatoshi; Kuwahara, Hisayuki;
Koyama, Takeshi
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| EP 1443068 | A1 | 20040804 | EP 2004-1922 | 20040129 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2004231869 | A2 | 20040819 | JP 2003-24250 | 20030131 |
| US 2004210011 | A1 | 20041021 | US 2004-767170 | 20040130 |
| PRIORITY APPLN. INFO.: | | | JP 2003-24250 | A 20030131 |

AB The modified polyoxyalkylene polyamine is obtained by addition reaction of a polyoxyalkylene polyamine and an alkenyl group-containing compound. The epoxy resin cured with the modified polyoxyalkylene polyamine has good chemical resistance. Thus, 100 parts Epicoat 828 (bisphenol A epoxy resin) was mixed 60 parts modified polyoxyalkylene polyamine obtained by reaction of Jeffamine D 230 (polyoxypropylenediamine) with styrene, and cured at 23° and 50% RH to give a coating film showing good resistance to 10% sodium hydroxide, methanol and ethanol.

L6 ANSWER 4 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:525094 HCAPLUS
DOCUMENT NUMBER: 141:72370
TITLE: Modified linear aliphatic polyamine for curing epoxy resin
INVENTOR(S): Echigo, Masatoshi; Kuwahara, Hisayuki;
Koyama, Takeshi
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: Eur. Pat. Appl., 21 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|------------|
| EP 1433775 | A2 | 20040630 | EP 2003-29488 | 20031219 |
| EP 1433775 | A3 | 20040721 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2004250424 | A2 | 20040909 | JP 2003-118064 | 20030423 |
| US 2004171791 | A1 | 20040902 | US 2003-739006 | 20031219 |
| PRIORITY APPLN. INFO.: | | | JP 2002-377729 | A 20021226 |
| | | | JP 2003-118064 | A 20030423 |

OTHER SOURCE(S): MARPAT 141:72370

AB A modified linear aliphatic polyamine obtained by addition reaction of a linear aliphatic polyamine having a specific structure and an unsatd. hydrocarbon compound has a low viscosity and it provides, when used as a curing agent for epoxy resin, an epoxy resin composition which can provide an epoxy resin cured product having an excellent properties such as chemical and water resistance. The unreacted polyamine in the modified product can be stripped prior to use. Thus, reacting diethylenetriamine with styrene in

the presence of Li amide gave a modified polyamine.

L6 ANSWER 5 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:261002 HCAPLUS
DOCUMENT NUMBER: 140:288916
TITLE: Modified cyclic aliphatic polyamine, epoxy resin
composition, and cured product
INVENTOR(S): Koyama, Takeshi; Ichikawa, Tetsushi;
Kuwahara, Hisayuki; Echigo, Masatoshi
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: Eur. Pat. Appl., 14 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|------------|
| EP 1403244 | A2 | 20040331 | EP 2003-20588 | 20030918 |
| EP 1403244 | A3 | 20040804 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| JP 2004115427 | A2 | 20040415 | JP 2002-280556 | 20020926 |
| JP 2004217560 | A2 | 20040805 | JP 2003-6126 | 20030114 |
| US 2004106684 | A1 | 20040603 | US 2003-669701 | 20030925 |
| PRIORITY APPLN. INFO.: | | | JP 2002-280556 | A 20020926 |
| | | | JP 2003-6126 | A 20030114 |

AB A modified cyclic aliphatic polyamine has a low viscosity and content of unreacted polyamine and when used as a curing agent for an epoxy resin composition has an improved workability without adding solvent or diluent. The above modified cyclic aliphatic polyamine is obtained by addition reaction of a cyclic aliphatic polyamine such as isophoronediamine and norbornanediamine and an alkenyl compound such as styrene. The reaction of 4 mol isophoronediamine and 4 mol styrene gave a product (containing mono and di substituted diamine) which was used to cure an Epicoat 828 coating composition (48 phr cure agent) showing excellent water resistance (water drop test at 1/4/7 day intervals), chemical resistance (10% NaOH and H2SO4 solns. for 7 days at room temperature), and salt spray resistance (JIS K5400).

L6 ANSWER 6 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:5181 HCAPLUS
DOCUMENT NUMBER: 140:60560
TITLE: Amino compositions use as curing agents for epoxy
resins with long pot life and good apperance
INVENTOR(S): Ichikawa, Tetsushi; Kuwahara,
Hisayuki; Echigo, Masatoshi
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|--|------|----------|-----------------|----------|
| EP 1375554 | A1 | 20040102 | EP 2003-13367 | 20030617 |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |

| | | | | |
|---------------|----|----------|----------------|----------|
| JP 2004075989 | A2 | 20040311 | JP 2003-171071 | 20030616 |
| CN 1468883 | A | 20040121 | CN 2003-149428 | 20030618 |
| US 2004044176 | A1 | 20040304 | US 2003-463594 | 20030618 |
| US 6908982 | B2 | 20050621 | | |

PRIORITY APPLN. INFO.: JP 2002-176977 A 20020618
JP 2002-176980 A 20020618

OTHER SOURCE(S): MARPAT 140:60560

AB The amino composition comprises ≥ 1 amino compound selected from (PhCH₂CH₂)(R₁)NCH₂ACH₂N(R₂)(R₃) (I, A = phenylene, cyclohexylene group; R₁, R₂, R₃ = H, phenylene) as a main component obtained by addition reacting a diamine H₂NCH₂ACH₂NH₂ with styrene, wherein the content of the diamine is <15% and the content of the amino compound I (R₁-3 = H) is 50-100%. The amino composition used as a curing agent for an epoxy resin, is useful as a coating material and a metrial for civil engineering and construction. Thus, 100 parts Epicoat 828 (epoxy resin) was mixed with 48 parts amino compound prepared by reacting m-xylylenediamine and styrene, coated on a substrate and cured, showing pot life 280 min and good curing properties and coating film appearance.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 7 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2002:216106 HCAPLUS
DOCUMENT NUMBER: 136:248437
TITLE: Amino compound and process for producing the same
INVENTOR(S): Yonehama, Shinichi; **Ichikawa, Tetsushi**
PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan
SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|------------------|----------|
| ----- | --- | ----- | ----- | ----- |
| EP 1188740 | A2 | 20020320 | EP 2001-120771 | 20010907 |
| EP 1188740 | A3 | 20031015 | | |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO | | | | |
| TW 539661 | B | 20030701 | TW 2001-90121904 | 20010904 |
| JP 2002161076 | A2 | 20020604 | JP 2001-269074 | 20010905 |
| US 2002055605 | A1 | 20020509 | US 2001-948954 | 20010910 |
| US 6562934 | B2 | 20030513 | | |

PRIORITY APPLN. INFO.: JP 2000-276308 A 20000912

OTHER SOURCE(S): MARPAT 136:248437

AB An amino compound is obtained by addition reaction of diamine represented by H₂N-H₂C-A-CH₂-NH₂, wherein A is a phenylene group or a cyclohexylene group, and an alkenyl compound. The compds. are useful as crosslinking agents for epoxy resins. A compound was prepared by reaction of m-xylenediamine with styrene.

L6 ANSWER 8 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:78549 HCAPLUS
DOCUMENT NUMBER: 130:183865
TITLE: Epoxy compounds-modified xylylenediamine or bis(aminomethyl)cyclohexane as crosslinking agents and epoxy resin compositions containing them for whitening-resistant nonsticky coatings
INVENTOR(S): Mizuno, Tetsuo; **Ichikawa, Tetsushi**; Seki,

PATENT ASSIGNEE(S): Kimio
 SOURCE: Mitsubishi Gas Chemical Co., Ltd., Japan
 Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|----------|
| JP 11029622 | A2 | 19990202 | JP 1997-186884 | 19970711 |
| PRIORITY APPLN. INFO.: | | | JP 1997-186884 | 19970711 |

AB The epoxy resin compns. contain crosslinking agents prepared by reacting A(CH₂NH₂)₂ (A = C₆H₄, cyclohexylene) with diepoxy compds. and monoepoxy compds. The compns. show high interlayer adhesive strength when coated in layers. M-xylylenediamine 42.5, Epikote 828 (bisphenol A diglycidyl ether) 21.9, and Cardura E10 (glycidyl neodecanoate) 2.3 parts were heated at 100° for 1 h, and then mixed with 28.6 parts C₆H₅CH₂OH and 4.8 parts (PhO)₂P(O)H to obtain a crosslinking agent. Epikote 801 was mixed with the crosslinking agent and applied on a steel plate to form a nonsticky coating layer with pencil hardness HB.

L6 ANSWER 9 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1996:449159 HCAPLUS
 DOCUMENT NUMBER: 125:88233
 TITLE: Epoxy resin curing agents for coating films with good water and blushing resistances and adhesion
 INVENTOR(S): Ichikawa, Tetsushi; Seki, Kihiro; Kono, Yutaka
 PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Co., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|------------|
| JP 08104738 | A2 | 19960423 | JP 1994-273859 | 19941108 |
| PRIORITY APPLN. INFO.: | | | JP 1994-273859 | A 19941108 |
| | | | JP 1994-188399 | 19940810 |

AB Title agents are composed of (A) polyamine compds. containing ≥1 compds. chosen from (a) xylylenediamine (I), (b) modified compds. prepared by Mannich reaction of I, phenolic compds., and aldehydes, (c) modified compds. prepared by reaction of I and epoxy compds., (d) modified compds. prepared by reaction of I and carboxyl group-containing compds., and (e) modified compds. prepared by Michael reaction of I and acrylic compds. and (B) aliphatic amine compds. Thus, a composition containing 100 parts bisphenol A diglycidyl ether and 41 parts curing agent [containing 2 parts hexadecylamine and 98 parts polyamine compound (prepared from 272 g m-xylylenediamine and 231 g dimer acids)] was coated on a steel plate and cured at 23° for 7 days.

L6 ANSWER 10 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN
 ACCESSION NUMBER: 1995:487807 HCAPLUS
 DOCUMENT NUMBER: 122:215575
 TITLE: Polyphenylene ether composition improved in molding

properties, solvent-resistance, oil-resistance and impact-resistance

INVENTOR(S): Miya, Shinya; Kano, Yuichi; Kuwahara, Hisayuki; Kasuya, Takeshige; Fukaya, Yosio

PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Co., Inc., Japan

SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------------------|------|----------|-----------------|-------------|
| EP 610890 | A2 | 19940817 | EP 1994-101905 | 19940208 |
| EP 610890 | A3 | 19950913 | | |
| R: BE, DE, FR, GB, NL | | | | |
| JP 07126519 | A2 | 19950516 | JP 1994-11076 | 19940202 |
| US 5596040 | A | 19970121 | US 1995-539103 | 19951004 |
| PRIORITY APPLN. INFO.: | | | JP 1993-21333 | A 19930209 |
| | | | JP 1993-224591 | A 19930909 |
| | | | US 1994-194221 | B1 19940209 |

AB The title composition comprises (a) .apprx.20-80% polyphenylene ether resin, (b) .apprx.0.01-10% processing aid modified aromatic hydrocarbon-formaldehyde resin produced by modifying an alkyl benzene-formaldehyde polymer, using a modifying agent reactive with its methylol group, methylene ether group, or acetal group; (c) .apprx.2-30% impact modifier rubber-like polymer; and (d) .apprx.20-80% a polyamide resin compatibilizer; optionally polypropylene as melt flow process aid. A composition containing poly(2,6-dimethyl-1,4-phenylene) 41.5, Nikanol A maleated xylene-formaldehyde polymer (I) 1.5, Kraton G 1651 7.0, and nylon 6 50.0 parts was used to produce injection molded test pieces having heat deflection temperature (ASTM D648) 184° and notched Izod impact strength 207 J/m, vs. 190 and 14, resp., without I.

L6 ANSWER 11 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1994:457045 HCAPLUS

DOCUMENT NUMBER: 121:57045

TITLE: Chemoselective reduction of nitro groups in the presence of olefinic, ester, and halogeno functions using a reducing agent of CO and H2O catalyzed by Rh carbonyl clusters

AUTHOR(S): Kaneda, Kiyotomi; Kuwahara, Hisayuki; Imanaka, Toshinobu

CORPORATE SOURCE: Fac. Eng. Sci., Osaka Univ., Toyonaka, 560, Japan

SOURCE: Journal of Molecular Catalysis (1994), 88(3), L267-L270

CODEN: JMCADS; ISSN: 0304-5102

DOCUMENT TYPE: Journal

LANGUAGE: English

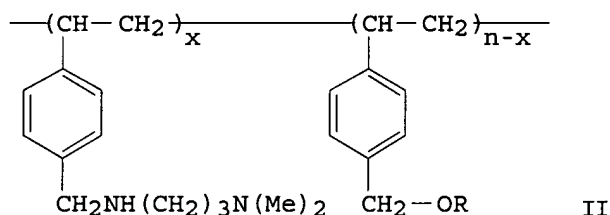
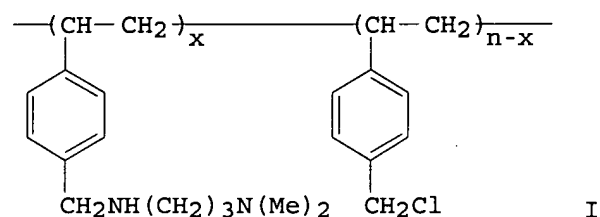
OTHER SOURCE(S): CASREACT 121:57045

AB A catalyst system of Rh6(CO)16 and N,N,N',N'-tetramethyl-1,3-propanediamine (TMPDA) or aminated polystyrene achieves highly chemoselective reduction of aromatic nitro groups in the presence of olefinic, ester, and halogeno functions using CO and H2O. Use of the aminated polystyrene leads to easy isolation of amino products from reaction mixts. by forming a polymer-bound Rh6 carbonyl cluster.

L6 ANSWER 12 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:489808 HCAPLUS

DOCUMENT NUMBER: 117:89808
 TITLE: New polymer-bound rhodium carbonyl cluster catalysts containing two functional ligands for hydrohydroxymethylation of olefins
 AUTHOR(S): Kaneda, Kiyotomi; Kuwahara, Hisayuki; Imanaka, Toshinobu
 CORPORATE SOURCE: Fac. Eng. Sci., Osaka Univ., Toyonaka, 560, Japan
 SOURCE: Journal of Molecular Catalysis (1992), 72(3), L27-L30
 CODEN: JMCADS; ISSN: 0304-5102
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 OTHER SOURCE(S): CASREACT 117:89808
 GI



AB The hydroxymethylation of 1-butene in the presence of functionalized polymer ligands I and II [R = CH₂CH₂OH, CH₂CH(OH)CH₂OH (III), CH₂CH₂OEt] (with R group acting as immobilized ROH solvent and diamine group as immobilized catalyst additive), Rh₆(CO)₁₆, CO, H₂O, and solvent (EtOH, THF, benzene) afforded pentanol and 2-methyl-1-butanol as main products. Aminated polymer III with 2 OH groups per styrene unit gave the highest yield of C-5 alcs. Reduction of pentanal with aminated polymer-bound Rh₆ cluster complex afforded pentanol in quant. yield, indicating a common active Rh species might participate in hydroformylation and reduction

L6 ANSWER 13 OF 14 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:25549 HCAPLUS
 DOCUMENT NUMBER: 114:25549
 TITLE: Polyamides for laminates
 INVENTOR(S): Harada, Masahiro; Ichikawa, Tetsushi; Tanaka, Kazumi
 PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Co., Inc., Japan
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
 CODEN: JKXXAF
 DOCUMENT TYPE: Patent
 LANGUAGE: Japanese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------------|------|-------|-----------------|-------|
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